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ABSTRACT

Modern Western European ways of thinking are based on a print culture that uses verbal metaphors, and indigenous ways of thinking are based on an oral culture that uses visual metaphors. Visual metaphors provide a dominant mode of information processing and are used among indigenous groups to share cultural knowledge, yet Western culture is oblivious to it. One way of knowing involves reading people through nonverbal communication, but in Western culture, nonverbal communication can be virtually invisible. Problems occur when knowing and sensitive children from oral cultures such as American Indians are judged by people from cultures that do not know much about visual thinking. These children are aware of visual space, are sensitive to nonverbal communication, and understand that silence communicates. In writing English compositions for school, these children do not use the syllogistic reasoning of Aristotle because it is not part of their cultural knowledge, nor do they use the forms of logic that underlie the classical tradition of rhetoric. These students' writings have been criticized by their teachers as not having any structure. The fact that their structure is based on visual metaphor goes unnoticed. Teachers must be aware of the distinction between these two types of metaphors if they are to understand how indigenous people learn. Two dominant American Indian metaphors--the journey and the Quaternity (recurrence of the number four)--are discussed, and aspects of visual literacy that inform both aesthetics and the psychology of visual thinking are examined. (Contains 43 references.) (TD)

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Visual Metaphor, Cultural Knowledge, and the New Rhetoric

Robert N. St. Clair

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Modern Western European ways of thinking are based on a print culture that tends to use verbal metaphors, and indigenous ways of thinking are based on oral culture that tends to use visual metaphors. This paper focuses on the Quaternity, a common recurring theme of the sacred number four in oral cultures that can be seen in the Mayans' four pillars, the Navajos' four sacred mountains, and the Plains Indians' Medicine Wheel. Teachers need to be aware of the distinction between these two types of metaphors if they are to understand better how Indigenous people learn.

After thousands of years of following the Western European tradition of rhetoric (the art of using language), we have finally come to accept the fact that this scholarly tradition is culture bound. While it has undergone many changes with the advent of the printing press, it still maintains its classical Greek and Roman roots in the works of Aristotle, Cicero, and others. Although once holistic, this tradition has fragmented into academic camps with Speech Departments handling speaking and debates, English Departments holding the reins over the college essays, and Law Schools dominating issues relating to argumentation.

This realization of culture boundness of thinking on the subject of rhetoric brings with it a sincere effort among rhetoricians to develop some insight into how a non-Western system of communication, or discourse, works. They have found that non-Western systems of rhetoric tend to use visual instead of verbal metaphors. Several interesting new ways of studying rhetoric have recently emerged (Kennedy, 1997). Once seen as the study of persuasion (Scott, 1959), rhetoric is now seen as the study of practical reasoning (Toulmin, 1958; Perelman & Olbrechts-Tyteca, 1969). It is now concerned with epistemology as a way of knowing. The new rhetoric, it is argued, is used to discover and understand knowledge. Hence, it is epistemic knowledge-seeking. It is in this context that this essay addresses the use of visual metaphor as a way of expressing knowledge.

Metaphors are really statements based on some kind of analogy where two things are compared to each other. This use of language allows knowledge to be seen in a new perspective. Visual metaphor is a term that designates how visual space is organized as a means of sharing cultural and social knowledge. The tradition investigated in this essay is non-Aristotelian, and it is based on non-Western epistemology that is embraced by oral cultures. Specifically, this essay looks at the tradition of the Quaternity, a common recurring theme of the sacred number four in oral cultures.

It is important to understand that the visual metaphor of the Quaternity comes to us from an ancient pre-printing press Greek tradition, and consequently it

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should not be judged by the tenets of modern Western rhetoric. Back then people believed that everything belonged to the great circle of life. In modern mathematics, we would call this concept modularity. For example, the face of a clock runs in twelve-hour cycles and repeats this pattern over and over again. In the Quaternity, the pattern is based on the number "four." Things move through four stages and then repeat themselves. The day has four parts: morning, noon, evening, and night. Life has four parts: birth, youth, adulthood, and old age. The earth has four directions: north, south, east, and west.

What is interesting about these early Greek traditions is that they have cultural counterparts among many indigenous language groups in the Americas. The Mayans, for example, talk about the four pillars, the Navajo of their four sacred mountains, and the Sioux of their Medicine Wheel and four cardinal directions. Why do things repeat themselves in units of four? Why does the Quaternity continue to exist as a number of importance in the folklore of many indigenous traditions in the Americas? What does this mean for the study of comparative rhetoric?

Prior to answering these questions, I must provide the epistemological frameworks from which these traditions emerge. Hence, there are several preliminary concepts that must be addressed before discussing the tradition of the Medicine Wheel of the Plains Indians. In particular, I will discuss how visual metaphors are structured, cognitively processed, and symbolically presented. I shall also discuss the significance of the study of visual metaphors within bi-cognitive educational systems.

What are metaphors and how can they be visual?

What I find especially interesting in metaphor is that it is no longer considered a topic relegated to literature classes (Toulmin, 1958). Since the publication of Kuhn's (1970) model of scientific thinking, rhetoricians now realize that metaphors pervade all forms of knowledge. Kuhn, it should be noted, called these shifts in perspective *paradigms*. Brown (1976), a specialist in the sociology of art, sees metaphors operating in a larger context. He notes that metaphors provide a perspective on knowledge just as scientific paradigms provide a perspective on theoretical knowledge. Chet Bowers and David Flinders see an understanding of metaphors as essential for teachers because they "provide the schemes or cognitive models that are the basis of thought" (1990, p. 11).

A teacher who sees students as fragile human beings is using metaphor. He treats them as eggs and is afraid to hurt them. He does not want to see them crack. Another teacher may have a different metaphor when dealing with children. He may see the classroom as a battlefield. He wants his students to hit the target. His approach is one of toughening up the student for battle. They must combat the real world. Metaphors tell us much about those who use them. They provide insight into how these individuals view the world. Similarly, metaphors can be used to understand cultural differences. They tell us how some cultures envision space. They tell us why some cultures have stories about the stars, why some mark the land for cycles of the solstice and the equinox, and why some consider the land to be sacred.

In order to explain how this works, we must realize that there are several kinds of metaphors that can be found in knowledge systems. For example, in theory building there is a gradual metaphorical process of breaking up knowledge into different parts. In scientific discovery, the process begins with a simple *illustrative metaphor* that provides a global perspective or point of view on how a subject area is to be organized. The example chosen serves to illustrate how things are to be seen and understood. Such a metaphor is frequently employed in a period of revolutionary science where events are described from a new dialectical perspective by means of an overall picture that is a new way of looking at things (Kuhn, 1970).

An example of an illustrative metaphor is "the atom is like a solar system." It has a nucleus just as the sun is the solar system's nucleus. It has electrons whirling around that nucleus just as the sun has planets circling around it. With the passage of time, this global view comes to be more fully articulated, the details are filled out, and what was once a simple plan for the structuring of knowledge soon emerges as an *iconic metaphor*, a description picturing events in photographic detail.

This semiotic process of differentiation, going from a simple overview into a complex and detailed result, is not limited to the scientific use of verbal metaphors[1] or to print cultures. It can also be found in the employment of visual metaphors. Gombrich (1963), a noted art historian, argues that images and symbols have meaning and appear in different forms. They function as visual codes or emblems and evoke a sense of artistic and cultural value. Such visual metaphors require a cultural context for interpretation. He gives the example of the traffic lights in which the color red is coded to signal "stop" and green "go."

Gombrich entitled his collection of articles, "Meditations on a Hobby Horse." This selection of a title reflects his profound belief in visual metaphors in art. He maintains that a hobbyhorse is the equivalent of a "real" horse because it can be ridden metaphorically.[2] Thus there is a transfer of qualities from one sensory experience to another. Gombrich is concerned with the interpretation of symbols in art history, and his line of investigation has to do with questions of cultural value. He wants to know why gold, for example, has become a visual metaphor of value and why it has developed into derivative metaphor of noble simplicity.

We do not need to call upon art historians to understand how symbols organize visual space. We can find advocates among ordinary art teachers. Recently, one of them organized this knowledge of visual space around the concept of *visual literacy*. Dondis (1973) has directly addressed the internal structure of the visual metaphor. He speaks of the significance of the individual elements such as tone, color, line, texture, and proportion and how these are maneuvered within a visual space to create either tension or harmony within the confines of visual syntax. He notes that visual space is organized in that it provides guidelines for the construction of art. His work provides the basic elements of art that he feels can be learned and understood by all students of visual media. He provides insight into how visual structures are created to convey visual messages, in other words visual metaphors.

Dondis argues that the individual components of the visual process form a tool box for the artist. These components are the *dot* (which forms the minimal visual unit), the *pointer* (a marker of space), and the *line* (the articulator of form). But, there are also various *shapes*: the circle, the square, the triangle that occur in combinations, permutations, different planes of expression, and different dimensions of visual understanding. *Tone* (the presence or absence of light) is also a visual component that is employed along with *color* and *texture*. These are the visual elements from which a visual space is created, organized syntactically, and expressed metaphorically. These are the component, then, of visual literacy. Dondis demonstrates in his writing how *contrast* and *harmony* can be used as techniques to constitute a visual structure within the grammar of art. These techniques can be manifested in numerous ways as evidenced in Figure 1 below.

Figure 1. The use of contrast and harmony to constitute a visual structure.

CONTRAST	HARMONY
Instability in visual space	Balance in visual space
Asymmetry of forms	Symmetrical forms
Fragmentation	Unity
Irregularity	Regularity
Variation	Consistency
Complexity	Simplicity
Opacity: (Meaning is not obvious)	Transparency: (Meaning is obvious)
Episodicity: (Life is like a TV episode)	Repetition

The key to creating contrast or harmony comes from the fact that all visual patterns have a center of gravity. Dondis demonstrates how a simple dot can be placed within a square to reflect with balance or instability. He also shows how there is a power of attraction among objects in a visual space, which he calls the "law of grouping." Groups of objects fight for attention and in doing so express visual structures that connote either unity or fragmentation. The eye, he observes always seeks a simple solution—one of simplicity over complexity. Hence, the eye looks for patterns and patterned thinking has more to offer than just the relationship between psychophysiological phenomena and visual expression because no one unit of the system can be changed without modifying the whole.

Why are visual metaphors important? Why do they need to be explained? The answers to these questions come from an understanding of print cultures where words have replaced pictures and visual space has been reduced to the linear organization of the printed word. What these scholars tell us is that the metaphor of visual literacy is well articulated and defined within the field of art. Its theoretical foundations form the basis for analysis of major visually mediated traditions. It provides the rationale for the study of art history (Berger, 1977; Gombrich, 1979). It explains how cultures symbolically represent themselves and this can be done through the cultural analysis of art (Hatcher, 1974). It provides the concepts that articulate the language of painting and the structure of art

(Burnham, 1971; Enright, 1990; Goodman, 1976; Matejka & Titunik, 1977). Visual literacy provides the concepts behind art education and visual learning (Dwyer, 1978). Both aesthetic theories of art (Osborne, 1970) and the psychology of perception or visual thinking (Arnheim, 1969, 1974) depend on these models of visual literacy. Hence, the concept of visual perception is central to the study of visual metaphor and for this reason it merits closer inspection.

Visual thinking

Western cultures are so involved in written language that they have not seriously studied how humans structure information visually. However, Rudolph Arnheim (1969) differs from most of his fellow cognitive psychologists in that he is against the imposition of the print culture bias in research on human information processing models. Arnheim argues that those entrenched in this approach to research are only studying those psychological processes involved in the needs of a print culture. These models do not focus on the nature of those relational modes of cognition associated with the right cerebral hemisphere of the mind. They neither deal with visual thinking and its concern for the simultaneity of structures nor do they concern themselves with the role of affectivity in processing sociocultural values.

Gavriel Salomon (1979) shares the concern regarding the severe limitations of research in the theoretical framework of cognitive psychology. He reminds his colleagues that verbal languages evolved from earlier pictorial forms. They naturally developed from pictographic denotation and ideographic symbols. He also notes how verbal and visual thinking result in the creation of different experiences of cognition. What one learns from reading about an event is different from what one perceives if this information is processed within the mode of visual thinking. Hence, the world of visual metaphors is substantially different from the print culture world of verbal metaphors. This is why scholars who have approached the world of visual metaphors via the structures of the print culture have failed to fully understand the deeper meanings offered by those who live and express themselves within oral cultures. For example, Varda Langholz Leymore (1975) attempted to provide a semiotic analysis of commercial art and failed to do so because her model is essentially based on verbal patterns. When she is successful, it is because the visual pattern she is talking about actually accompanies her verbal description and analysis. By way of contrast, Donis Dondis (1973) used a very different language to discuss visual communication. In this case, there is a concern for the position of the dot, the movement of the line, the characteristics of a shape, the dimensions and the scale of the picture, the kind of color and tone, and so on. Visual meaning, in this context, comes not from verbal dichotomies, but from Gestalt configurations.

Print cultures versus oral cultures

What is significant about this dichotomy between the print culture of the Western intellectual tradition and the oral culture of the American Indians is the fact that each medium provides substantially different ways of knowing (Salomon,

1979). Where one sees words, the other sees visual patterns, shapes, colors, and moods. Where one finds education in the formal classroom with its structured textual requirements, mandatory certification hours, and rigid didactic requirements, the other seeks not knowledge, but understanding and employs an apprenticeship model in which the elders are given full opportunity to interact with the novice in an unstructured and experientially based system of learning (TenHouten & Kaplan, 1973).

The differences between the print culture of the Western intellectual tradition and the oral culture of American Indians are informative because they demonstrate how the child must accommodate to the dictates of the formal school systems to which they are exposed (see Figures 2 & 3). The formal school systems tend to focus on analysis whereas the oral culture is concerned with understanding how things are related to one another. The analytical mode is sequential and highlights rationalism and the use of logic, whereas the relational mode is concerned with the emotive or affective aspects of a simultaneous presentation of imagery.

Figure 2. Information processing modes of print and oral cultures

	PRINT CULTURE	**ORAL CULTURE**
Cognition	Analytical Mode: Look for the details and not the whole.	Synthesizing Mode: Look for the overall meaning and how the details fit together.
Processing	Sequential: Go from left to right.	Simultaneous: View everything at once just as one would view a painting.
Thought	Relational, Logical: Reason logically and use syllogisms. Put people into categories. Do not rely on emotions.	Affective, Emotive: Feelings are important. Use emotions to understand others.
Predilections	Mathematics, Science	Art, Music, Dance
Legitimization	Verbal Metaphor: Use metaphors based on language.	Visual Metaphor: Use metaphors based on the reorganization of visual space.
Literacy	Print, Technology	Orality, the Arts

Figure 3. Educational cognitive styles

	PRINT CULTURE	*ORAL CULTURE*
Relations of Child & Peers	The child prefers to work alone, likes competition, & is task-oriented.	The child prefers to work with others, likes cooperation, & is person-oriented.
Relations of Child & Teachers	The child prefers formal instruction, avoids stroking, & seeks cognitive feedback.	The child seeks personal instruction, stroking, and affective feedback.
Relations of Child to the Curriculum	Curriculum is made to incorporate details & structures. It uses impersonal content & structured subroutines. It stresses facts & formal knowledge. The *discovery approach* works best.	The curriculum incorporates the gestalt approach. It uses a humanized format. Its focus is on wisdom, & group attitudes are emphasized. The *experience approach* works best.

It is not surprising, therefore, that the print culture has a high regard for mathematics, science, and literary criticism while the oral culture values the graphic arts, music, and dance. Since these cultures are separated by cognitive styles, they are also divided by the kinds of metaphors they use.

For children growing up in a bicultural system, the problems of literacy are compounded. They must learn how to reconstruct the social reality of the host culture and also be able to shift from one system or form of legitimization to the other. At home, for example, the oral culture framework may pervade with its emphasis on cooperation, being person oriented, seeking affection as a feedback for group sanctioned behavior, and a concern for how things are related to a larger patterns or cultural configuration. But at school, the situation can be reversed. Here children are often asked to work alone and to compete with their fellow students. The focus is on completing daily assigned tasks for which the rewards are many, but of a different nature. Gold stars and the grading system replace the feelings of warmth and love of the primary socialization of the home. In school, there is much concern with details and with the acquisition of knowledge. Many of the deep concerns of the bicultural child go unnoticed or unconsidered. Under these circumstances, the difference between primary socialization in the home and the secondary socialization of the school system is one of social distance and personal alienation.

For the child of the Western tradition, the rhetorical style comes from the writings of Aristotle or from the essays of Cicero, but for the child of the oral culture, the Medicine Wheel and other strong visual imagery provide the essential metaphors of life (Blair, 1975).

Visual knowledge

Visual metaphors are just another way in which knowledge can be shared. In the heritage of the Western world, this is done essentially by means of a *print culture*. What this entails is an analytical mode of cognition in which verbal information is processed sequentially, logically, and rationally (TenHouten & Kaplan, 1973). In this framework, there is a predilection for such disciplines as the natural sciences, mathematics, and other rationally oriented and logically based activities. By way of contrast, there are *oral cultures* in which the relational mode of cognition prevails (Ramírez & Castañeda, 1974). Under this approach to human information processing patterns are not analyzed sequentially as in verbal expression, but are seen as simultaneous structures, as visual patterns. In addition, these patterns are perceived in more emotional terms. Consequently, those who operate within this cognitive style have a predilection for music, dance, and other forms of artistic expression.

What is significant about oral cultures is that they make common use of visual metaphors. It is their way of symbolizing their beliefs about the world. It is their way of organizing knowledge. This way of knowing is legitimized by the culture and expressed in a tradition of rich visual imagery. This legitimization of knowledge is commonly referred to as *the way* of the people. It is what folklorist and anthropologists attempt to describe, understand, and know when dealing with oral cultures. Their research details a different model of information processing, a sanctioned cognitive style, and another perspective. For these reasons, the Medicine Wheel is especially insightful in revealing and dealing with visual metaphors as bearers of cultural epistemology. But before considering this epistemological visual metaphor in detail, it is necessary to explicate the concept of visual metaphor as rhetoric.

The rhetoric of visual metaphors

Rhetoric is essentially a way of thinking about the world and is predominately concerned with the perception and description of cognitive structures. It has a structural interest in the presentation of information. It focuses on structures which may be highlighted or foregrounded, and this is specifically accomplished in terms of such rhetorical devices as the:

- narration of a event
- description of a scene
- illustration of a concept by means of examples
- intricacy of a process underlying an event
- definition of major nomenclature upon which deductive conclusions rest
- classification of information into bodies of evidence
- comparison and contrast of underlying epistemological structures
- analysis of a cause and its effects on the issues being investigated
- employment of deductive reasoning and the use of induction where facts need re-evaluation as to evidential status
- use of analogical reasoning in arriving at conclusions

- employment of logical argument
- emotive persuasion in formulation of a charge or an issue which is central to a cause (Benson & Prosser, 1972; Brent & Lutz, 1974).

More recently, it has been argued by Brown (1976) that root metaphors also provide some insight into the structure of a system by focusing on one unique perspective and by structuring lexical expressions from a certain point of view. These root metaphors, it can be argued, play a major role in the structuring of knowledge because they are epistemological in nature (St. Clair, 1980). They are the foundation upon which knowledge is given perspective. Just how this is accomplished is readily evident in some theoretical models, for example, which employ the Aristotelian metaphor of growth (Nisbet, 1969). Such models provide a major filter for their own community of specialists in which a framework is preordained through which all structures are created, organized, and coordinated (St. Clair, 1985).

Rhetoric versus dialectics

When Aristotle presented his answer to the problematic nature of *physis*[3] in Greek culture, he used the natural metaphor of growth as his way of explaining why and how change occurs (see Figure 4). The material cause is where growth begins, and the final cause (*telos*) is where it ends. In the transition from the beginning to the end is the alteration of forms, the formal cause. But change has to be connected for a purpose and underlying reason. For Aristotle, this was the motor cause, the original plan behind the growth itself (Cornford, 1952).

Figure 4. Aristotelian parallels of growth and rhetoric

The Enfoldment	The Growth Stages	Rhetorical Stages
Prime Matter	This is the beginning of the process of growth.	This is the introduction to the essay where the thesis statement is given.
The Form (Morphology of Growth)	The various forms which growth undergoes.	The body of the essay where the ideas grow, expand, take on different forms, and are discussed.
The Final State of Growth	The telos, conclusion of the growth process.	The conclusion of the essay, a summation of the thesis statement.
Motor Cause or Thematic Connection	The common thread, the unifying fact, the underlying plan.	The thesis, the theme, the rationale for the essay.

Within the Western tradition of rhetoric, one divides an essay into three parts: the introduction, the body, and the conclusion. The parallels here with the Aristotelian causes are obvious. Growth begins with primary matter, it undergoes a series of changes, and terminates with the final cause. Similarly, an essay begins with an introduction and expands the concept discussed into various forms of evidence, logical reasoning, and persuasive thinking. These various forms are known as the body of the essay. Finally, the essay is concluded just as growth also has its terminus. The path of growth from the introduction to the conclusion is connected by means of a thesis statement, a basic theme. It is the Aristotelian equivalent of a motor cause, an underlying reason for the process of growth.

The visual representation of the growth metaphor

It is not surprising that this parallelism between rhetorical theory and the growth metaphor exists since both are products of Aristotle's own system of thought. But the significance of foregrounding the infrastructure of contemporary models of rhetoric is not to draw on the parallels between the growth metaphor and the structuring of an essay. What is important about the framework is that it is, in essence, an invisible matrix that silently operates within the epistemological framework of the culture itself. Although the metaphor goes unnoticed, it still operates as a structuring device for the organization and the presentation of written knowledge, debate, forensic rhetoric, and numerous other forms of knowledge presentation. It is not until one leaves the Western world and enters into the visual metaphors of the Mayans and other indigenous groups, for example, that it becomes obvious that other fundamental rhetorical systems, such as the Quaternity, can be employed as devices for the organization of cultural knowledge

There are two dominant metaphors among most indigenous groups in the Americas. One of them is the journey and the other is the Quaternity.[4] Among many of these groups, both metaphors are combined into the Quaternity, which consists of a circle in which the solar cross is inscribed. The circle represents the eternality of motion, and the cross signifies the four cardinal directions of the earth, the four winds, the four spirits of nature, and so forth. It would appear to the uninitiated that this emblem is just an artistic expression of minor cultural significance. There are two roads within this circle, and they are represented by the arms of the solar cross. One must experience life by taking one of these roads, go to the center, and then venture off in a new direction. Not all indigenous groups use these metaphors; however, many do.

Teachers of the western ways employed to teach composition on Indian reservations seem to comment endlessly on the difficulty their students are having with the basic tripartite system of Aristotelian rhetoric (Cooley, 1981; Cooley & Ballenger, 1981). They do not seem, it is argued, to begin their essays with an introduction, expound their ideas into a body of thought, and conclude with a strong ending. Rather, they strike out in a certain direction to explore some ideas, feelings, sensation, and moods. After a while the essay suddenly turns into another direction without any connection, without a central theme, and without

coherence markers. The whole paper is cyclical. It is, they argue, in the form of the spokes of a wheel. They always come to the center before striking out into another direction. Furthermore, these teachers contend that there is too much use of allegory and personification. The trees talk, and so do the animals. The birds leave messages and warnings. The sun welcomes them. The moon watches over them. The flowers feel their presence. These writings are childlike, they argue. They are lost in concrete operational thought (Ramírez & Castañeda, 1974).

Each of the four cardinal directions of the medicine wheel represents a perspective of the symbolic self (see Figure 5). Each one is incomplete by itself. The balance of the four great powers is known as the *Quaternity*. Carl Jung (1969) found great significance in the quaternity. For him it was the Mandala symbol representing the four basic human types: intuition, sensation, thinking, and feeling as seen in Figure 6 (Jung, 1923). These types function as opposites, Jung noted. The thinking type is the counterpart of the feeling type, and the intuitive person is contrasted with the sensation type. In the first two decades of life, one is dominant in one of these four types. Later, secondary and tertiary characteristics develop creating a temperament, a combination of types (Keirsey & Bates, 1984). But most significant of all is the underdeveloped trait that Jung calls the *shadow*. Until this part of a person becomes developed, the individual is unbalanced. However, when this great moment arrives, the individual arises to a new level of consciousness, the *quintessence*. The four parts of the person act as one, the person is whole, the self is united. This quintessence is the rationale behind the medieval concept of the sacred number five in Western thought.

The Jungian Quaternity of personality types

According to Jung, the individuation process involves the separation of the ego from the self and the eventual return or reunion of the ego and the self in later life. In the first stage of development, the ego and the self are one. The child below the age of two cannot usually distinguish between self and other. In psychiatric terminology, this is referred to as a stage of inflation, but symbolically it represents an original wholeness in which all is unconsciousness. In literature, this original age of mankind is characterized by the legend of the Golden Age or by the story of the Garden of Eden before the apple of consciousness was eaten from the Tree of Knowledge. At this stage, Jung argues, the self is experienced as a deity.

During the second stage, the ego emerges from the self and begins to experience the pains of consciousness. This is where the concept of evil enters and is often characterized in mythological terms as the Fall of Man in the Garden of Eden or the tarnishing of the Golden Age and its decline into the Age of Bronze. Many myths depict this period as the birth of consciousness and the alienation of man from god. This fall of man into the realm of consciousness is also depicted as the departure from the world of darkness into the world of light. For Jung, the dark basement represents the world of the original self and the upper floors of a house in his dream symbology are interpreted as signs of consciousness. He also quotes Buddhist teachings and feels that they represent his notion of the

Figure 5. The cardinal directions as Quarternity

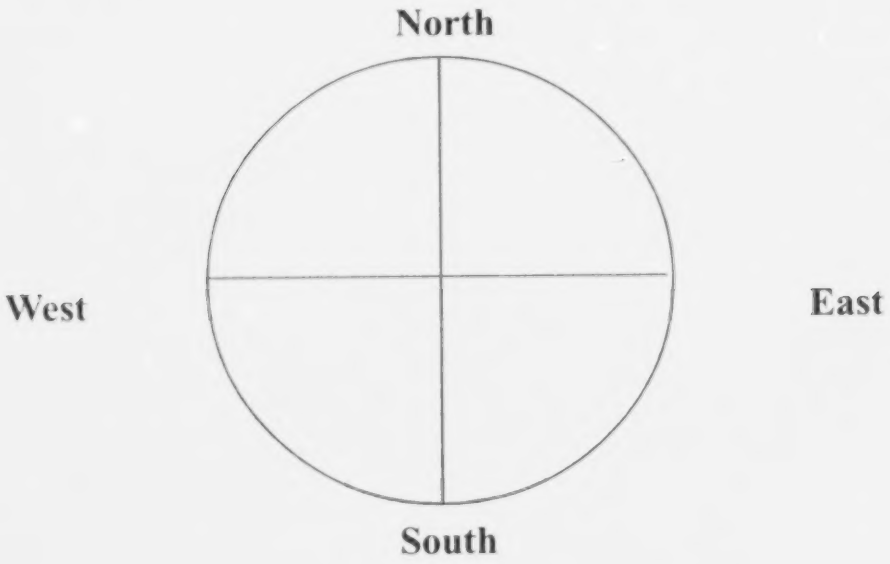
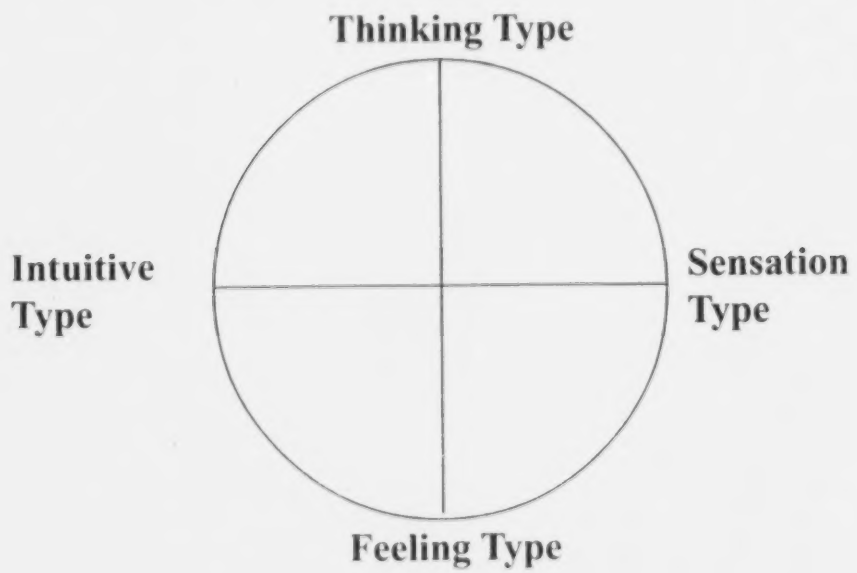


Figure 6. The Quaternity and the Quintessence



world of darkness. In Buddhism, the quest for *avidya* or not-knowing (unconsciousness) is seen as a return to the original darkness of the self. Not all scholars, however, fully agree with Jung on this last point. For many, the original self dwells in the World of Light and enters into the World of Darkness known as consciousness. It is in this state of consciousness that one forgets one's original self, and it is this stage which has been called sin.

As the ego continues to emerge and become alienated, it is eventually separated from the wholeness of the self. It is divorced from the powers of darkness. It is alienated from the *Force*. It takes a mid-life crisis or an empty nest challenge, Jung argues, before the individual is forced to look inwardly. For those who don't, the struggle continues and the pains of consciousness continue to grow exponentially.

Here we have the journey metaphor and the Quaternity. It is a different kind of journey from those of the indigenous groups of North America, but it does present cultural knowledge. In her discussion of visual metaphor, Evelyn Hatcher (1974) provides an informative analysis of the various elements of visual communication and relates her findings to the epistemological system of the Navajo tribes that she has worked with. She envisages art as a form of communication and notes how the arrangement of forms in space has special meaning. These elements receive additional meaning aesthetically from the way in which they are repeated, balanced, and colored. What these elements signify, however, varies from culture to culture. Usually, the triangle represents energy and activity and the circle signifies completeness. By the way, the upwards triangle in many cultures represents spiritual activity and the downward arrow signifies material concern. Nevertheless, Hatcher is among those who are sincerely searching for geometrical shapes in the form of universals of visual thinking (Arnheim, 1969).

Hatcher's use of visual metaphor among the Navajo differ from those described by Cooley (1981) and his associates (Cooley & Ballenger, 1981). In the groups that they worked with, they perceived the solar cross as the spokes of a wagon wheel. It is not how these tribes would see themselves, but it is their depiction of the events. They note how in writing English compositions Native American Indian students constantly return to the central hub before embarking on another trip to the rim of discussion. These students, it should be noted, do not use the syllogistic reasoning of Aristotle because it was not part of their cultural knowledge, nor do they use the forms of logic that underlie the classical tradition of rhetoric. By being different from the print culture and its school system, these students have been severely criticized by their composition teachers. They are often accused of not having any structure to their writing. The fact that they do have a structure and that it is based on the visual metaphor of the medicine wheel goes unnoticed. Their teachers fail to understand their special use of color symbolism and often treat their stories about animals as being allegorical, and their close union with nature as being personification. They take them literally at times and fail to draw upon the deeper symbolism of the epistemological system, which the medicine wheel represents.

The metaphorical genesis of the western tradition

The Metaphor of Verbal Form is highly significant in Western culture. It has dominated centuries of social and cultural (epistemological) scripts. There was a time long ago when this metaphor of form was visual. In its antecedent form it appeared as the journey from Involution of the Spirit into the body (incarnation) and Evolution of the Spirit from the body and back into the spirit world. This is a visual metaphor upon which all Western religions are based, a metaphor that provides the rationale for metaphysics and the occult, a metaphor of Jungian archetypes.[5] However, by the time of classical Greek philosophy, the visual metaphor was lost. It was replaced by the metaphor of oppositional forms. This new Metaphor of Verbal Form symbolizes the Platonic World of Ideal Forms and the Augustinian City of God versus the City of Man.

The Metaphor of Verbal Form also underlies the Structuralism of Ferdinand de Saussure with its collective conscience (*langue*) and the Transformational Grammar of Noam Chomsky with its deep structures, d-structures, and linguistic competence. The Semiotics of Film, Art, Music, Dance and many interdisciplinary models of Language are based on this Verbal Metaphor of Form. Hence, in Western culture one finds that language functions as the new metaphor of form. It now provides the basis for analyzing visual metaphors (film, dance, opera, art, painting, etc.), visual literacy, and the interpretation of art through history (i.e., the iconic metaphors of form based on its parallelism to linguistic structure). Its only rival as a dominant Zeitgeist in Western history can be found in the Metaphor of the Path in Eastern culture (Campbell, 1988, 1990) and in the visual rhetoric of the Sioux (Niehardt, 1959).

Conclusion

Why did I spend so much time on visual metaphors? Why are they important? The answers to these questions have already been given. Visual metaphors provide a dominant mode of information processing. If we are ignorant of this fact, we come to believe that they don't exist. Daily, we see advertisements on television and in magazines. Each is a visual metaphor. Unfortunately, they are aimed at persuasion rather than at sharing relevant knowledge. When we turn to the use of these metaphors among indigenous groups, we find that visual metaphors are used seriously to share cultural knowledge. Visual thinking occurs all the time. The host culture that we live in is oblivious to many things. One way of knowing involves how to read people through nonverbal communication. Much communication is nonverbal, but in the host culture, nonverbal communication can be virtually invisible.

Visual information is also another way of knowing. It too is virtually invisible in our modern culture. The problem occurs when knowing and sensitive children are judged by cultures that do not know much about visual thinking. These children are aware of visual space. They are sensitive to nonverbal communication and understand that silence communicates. This essay provides background information on visual metaphors. It provides theoretical information, research models, and counter-traditions to past modes of thinking. The new rheto-

ric breaks away from the uses of formal logic and seriously looks at how we reason in everyday life. It does not include visual thinking. I not only argue that it should, I include information on how to begin that journey. I have cited noted authorities on the matter from such academic realms as rhetoric, philosophy of science, educational psychology, linguistics, and history. Visual metaphors need to be seriously studied and understood in the host cultures of North America.

Notes

[1]The study of art through history is the study of visual metaphors. This essay provides examples of such metaphors and it is argued that those insights derived from verbal metaphors can also be found in visual metaphors. The former tends to occur in print cultures and the latter occurs in oral cultures.

[2]Psychologists argue that metaphorical thinking does not begin until a child is at least four years old. Some of my students, Tina Rose and Tyra Beaseley, have argued that "pretend play" in children is the non-verbal expression of metaphor. Children envision the world from a certain perspective.

[3]The Greeks differed substantially from the Romans in their epistemological frameworks. The Greeks language deals with processes. It belongs to a process culture. For example, The word *physis* meant "becoming." Things came into being, rested there for a while and dissolved back into energy. For Heraclitus, things were frozen moments of time. The Latin language, on the other hand, was part of a product culture. They saw things and not processes. Therefore, it is not surprising that they translated *physis* as nature, the end product of becoming (telos).

[4]This visual metaphor was chosen for several reasons. Not only has the author done field work with several American Indian languages in which this metaphor predominates, but he also found it to be a coherent symbolic system that differs substantially from Western visual metaphors that dominate medieval art, and even contemporary advertising.

[5]One can still find this metaphor in the form of the Roman parade (*Triumphus*). The parade opened and closed with the symbol of the spirit. The remainder of the parade represented the stages of life, the trials and tribulations of being human and on the earth. This symbology can still be found in the Stations of the Cross and in the Tarot where the Magician brings spiritual life into the body.

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